

C l a i m s

1. A circuit arrangement with a load sensing system (LS) in which individual consumers (10, 14) arranged both in series with formation of a series section and also in parallel with formation of a parallel section to one another are connected to a hydraulic supply circuit (12) with at least one supply pump (P) and a fluid return (16), the load sensing system (LS) determining the highest load pressure at the time for the series and parallel section, characterized in that the load pressure which is highest at the time is relayed as the control pressure to a valve unit (18) such that if the load pressure of the parallel section is higher than the load pressure of the series section, the valve unit dramatically chokes the return (16) for fluid until the pressure of the supply pump (P) rises to or over the pressure required in the parallel section.
2. The circuit arrangement as claimed in claim 1, wherein the series or parallel section consists at least of one consumer (10, 14) and wherein preferably two series-connected consumers (10) of the series section are located in the fluid flow direction in front of the parallel section with a parallel consumer (14).
3. The circuit arrangement as claimed in claim 1 or 2, wherein the valve unit (18) is formed from a hydraulically controllable proportional slide valve, preferably a 2-way proportional slide valve.
4. The circuit arrangement as claimed in one of claims 1 to 3, wherein a bypass manometric balance (20, 22) is assigned to each consumer (10) of the series section.
5. The circuit arrangement as claimed in one of claims 1 to 4, wherein one control pressure line for the valve unit (18) is connected to a shuttle valve (24) of the series section and the other

control pressure line is connected to at least one shuttle valve (26) of the parallel section and to at least one shuttle valve (28) of the load sensing system (LS).

6. The circuit arrangement as claimed in claim 4 or 5, wherein the control inputs of the respective bypass manometric balances (20, 22) of the series section are each connected to the output of the shuttle valve (24) assigned to the series section.
7. The circuit arrangement as claimed in one of claims 1 to 6, wherein between the supply pump (P) and the return (16) a circulation manometric balance (38) is connected to the supply circuit (12) on which the highest load pressure altogether prevails.
8. The circuit arrangement as claimed in one of claims 1 to 7, wherein there is a proportional choke valve (30) between the consumer (10) of the series section which is the first in the fluid flow direction and the supply pump (P), as well as another proportional choke valve (32) between the respectively preceding and the respectively following consumer (10) of a series section.
9. The circuit arrangement as claimed in one of claims 5 to 8, wherein between the shuttle valve (26) of the parallel section and the assigned consumer (14) there are mutually deblockable nonreturn valves (48).
10. The circuit arrangement as claimed in one of claims 1 to 9, wherein the respective consumer (10) of the series section is a hydraulic motor and the consumer (14) of the parallel section is a hydraulic working cylinder.